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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,500	02/24/2000	Yasumasa Kuroba	2803.63637	5652

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EXAMINER

PATEL, GAUTAM

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 08/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/512,500

Applicant(s)

KUROBA ET AL.

Examiner

Gautam R. Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 3-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 17 July 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

~~# 10~~
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1. This is in response to amendment filed on 7-17-03 (Paper # 8).
2. Claims 1-6 remain for examination. Claims 3-6 are non-elected.

Election/Restriction

3. Claims 3-6 remains withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species there being no allowable generic or linking claim. Election was made with traverse in Paper No. 4. Election was made final in paper no. 5.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is reminded that **upon the cancellation of claims to a non-elected invention, the inventorship must be amended** in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

OBJECTION TO SPECIFICATION

4. The specification is objected for the following reason:

"The meaning of every term used in any of the claims/specification should be apparent from the descriptive portion of the specification with clear disclosure as to its import; ..." (see 37 CFR § 1.75, MPEP § 608.01(I)).

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Specification page 2 line 9 has an acronym "DE" that has not been defined in the specification first time it appears. Specification simply states "loaded from outside the housing (DE) of the disk drive. Loading from outside the housing has nothing to do with acronym "DE". And DE is NOT defined.

NOTE: These are well known acronym in this art, however the Applicants are urged to define them first time they appear in the specification.

corrections are required.

Claim Rejections - 35 U.S.C. § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371⁶ of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by Ohmi, US. patent 5,936,787 (hereafter Ohmi).

As to claim 1, Ohmi discloses the invention as claimed [see Figs. 3-6] including detecting vibration detecting phase determining write start and moving head comprising the steps of:

detecting the continuous vibration asynchronous with the rotational frequency of said spindle motor ;

detecting the phase of the detected asynchronous continuous vibration [col. 3, lines 19-58];

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determining the write start sector or the write end sector or the write start time or the write end time of each servo track based on said detected phase of the asynchronous continuous vibration [col. 9, lines 3-25 and col. 9, line 66 to col. 10, line 27]; and

moving said head by said head moving mechanism on said recording surface where said head positioning information is to be written and writing said information based on said write start sector or said write end sector [col. 2, line 66 to col. 3, line 9 and col. 9, lines 3-25].

NOTE: Ohmi discloses that error signals from rotational and axial direction are combined to produce a single adjustment signal. In other words write start sector place and time are inherently defined and writing starts accordingly.

Allowable Subject Matter

6. Claim 2 is objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

NOTE: Claim 2 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method of writing a servo track for disk file apparatus wherein "the step of determining the start sector or write end sector includes the sub-step of setting a servo track write position is behind the phase of the peak amplitude of the vibration in case where $f_c < f_r$ [as defined by equation $[(1-f_c/f_r) \times 180]$ degree]. And write start position ahead of the phase of the peak amplitude of vibration, when $f_c > f_r$." It is noted that the closest prior art, Ohmi. (US 5,936,787) shows a similar apparatus which reads the vibrational phase and frequency and adjust the head and also picks the write spot. However Ohmi fails to disclose details of the write pulse and when to place write pulse ahead or behind on what criteria as claimed by the Applicants.

Ohmi was cited as prior art reference in paper no. 5, mailed 3-20-03.

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7. Applicant's arguments filed on 7-17-03 (Paper # 8) have been fully considered but they are not deemed to be persuasive for the following reasons.

8. In the REMARKS, the Applicant argues as follows:

A) That: "In this operation of Ohmi, the correction can be started at a suitable timing before writing the information or before reading the information, so that it is not necessary for Ohmi to define the start timing of the writing or reading of information. For this reason, Ohmi fails to recite the steps (3) and (4) of the present invention." [page 11, para. 2; REMARKS].

FIRST: What else Ohmi does besides the limitation is incidental. So correction can be started or not relevant to what is being claimed. Especially when claim recites "comprising steps of".

SECOND: Limitation in step 3, claims "write end sector or the write start time or ...". in other words any ONE of the limitation has to be satisfied by Ohmi, which Ohmi clearly is doing.

B) That: "Contrary to this, the present invention relates to the STW apparatus for writing a servo pattern on the recording track. Since the target of the invention disclosed in Ohmi is the disk drive, it is necessary to attach a processing circuit thereto.control signal of this kind is not necessary for the present invention." [page 11, para. 3-4; REMARKS].

FIRST: What else Ohmi does besides the limitation is incidental. Especially when claim recites "comprising steps of".

SECOND: This aspect has NOT been claimed.

C) That: "the correction control for reducing unnecessary vibration can be always carried out in Ohmi, and it is not necessary to define the write start position of data ... in Ohmi. Contrary to this, the definition of the write start position of data ... is necessary to write data in the present invention." [page 12, para. 1; REMARKS].

See paragraph 8, section A and B, supra.

D) That: "Ohmi fails to disclose the problem of developing a diametrical displacement of the servo track between the write start position and the write end position on a recording disk in the STW operation." [page 12, para. 2; REMARKS].

FIRST: See paragraph 8, section A and B, supra.

SECOND: STW operation has NOT been claimed at all.

Allowable Subject Matter

9. Claim 2 is objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

NOTE: Claim 2 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method of writing a servo track for disk file apparatus wherein "the step of determining the start sector or write end sector includes the substep of setting a servo track write position is behind the phase of the peak amplitude of the vibration in case where $f_c < f_r$ [as defined by equation $[(1-f_c/f_r) \times 180]$ degree]. And write start position ahead of the phase of the peak amplitude of vibration, when $f_c > f_r$.". It is noted that the closest prior art, Ohmi. (US 5,936,787) shows a similar apparatus which reads the vibrational phase and frequency and adjust the head and also picks the write spot. However Ohmi fails to disclose details of the write pulse and when to place write pulse ahead or behind on what criteria as claimed by the Applicants.

10. **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST

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RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. ' 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Contact information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.



Gautam R. Patel
Patent Examiner
Group Art Unit 2655

August 14, 2003